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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/725,512      | 12/03/2003  | Dan Cromwell         | 100203000-1         | 3759             |

7590 06/17/2004  
HEWLETT-PACKARD COMPANY  
Intellectual Property Administration  
P.O. Box 272400  
Fort Collins, CO 80527-2400

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| EXAMINER |
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HYEON, HAE M

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| ART UNIT | PAPER NUMBER |
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2839

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/725,512

Applicant(s)

CROMWELL ET AL.

Examiner

Hae M Hyeon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because the cross-sectional views of the drawings are not showing the appropriate the cross-hatching lines for different materials such as metal, wood, or plastic. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The abstract of the disclosure is objected to because the word “ABSTRACT” is misspelled as “ABSTRAC.” Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 6 recites that the supporting device has a Y shape, but the present specification does not describe the Y shape of the supporting device.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
7. Claim 3 recites the limitation "the base and the extrusion" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 depends on claim 1, but claim 1 does not recite "the base and the extrusion." However, claim 2 recites "the base and the extrusion." Therefore, the examiner suggests the applicant to change the dependency of claim 3 to claim 2 instead of claim 1.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deeney (US Patent Application Publication 2003/0095392 A1) in view of Bright (5,833,472).

Deeney discloses a supporting device comprising a shim 30 inserted between an integrated circuit package 10 and a printed circuit board 22. Deeney teaches that the shim 30 is provided at each corner of the integrated circuit package 10 (see the paragraph [0015]). Also, Deeney teaches that the coefficient of thermal expansion (CTE) of the shims 30 should preferably match the CTE of the integrated circuit package 10 (see paragraph [0019]). Figure 3 of Deeney shows the shim 40 having an extrusion 46 that is inserted between the integrated circuit package 10 and the printed circuit board 22 and has a base 42. Figures 1 and 2 show the shim 30 having a base 34 an extrusion 36 that is inserted between the integrated circuit package 10 and the printed circuit board 22. However, Deeney does not disclose how the shim 30 is mounted on the printed circuit board 22.

Bright discloses an integrated circuit package 2 supported on a package holder 30 which is mounted on a circuit board 8 by a screw 80 and a dimple 14. The official notice is taken that a fastener comprising a screw or a dimple is well known type of fasteners.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the supporting device taught by Deeney such that it would

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have fastening means such as a screw or a dimple to mount the shim on the printed circuit board as taught by Bright because a screw or a dimple is one of the simplest way to securely mount an object and well known fastening means.

***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. 6,102,711 by Hanada et al., US Patent No. 6,220,870 B1 by Barabi et al., and US Patent No. 6,563,213 B1 by Wong et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M Hyeon whose AU is 2839 and whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

**Any response to this action may be mailed to:**

**Commissioner for Patents**

**P.O. Box 1450**

**Alexandria, VA 22313-1450**

For additional information regarding this new address, which was effective May 1, 2003, see *Correspondence with the United States Patent and Trademark Office*, 68 Fed. Reg. 14332 (March 25, 2003).

Hae M Hyeon  
Examiner  
Art Unit 2839

hnh hnh

Hae Moon Hyeon